Using the Multi Screen Feature

# Using the Multi Screen Feature

The multi screen feature enables you to combine several character screens into a single dialog. Intermediate screens can be hidden so that they cannot be seen by the user. Data can be collected from several screens and can then be presented in a different way.

This chapter covers the following topics:

- Multi Screen Scenarios
- Required Steps
- Displaying All Defined Multi Screen Rules
- Detecting the First Character Screen
- Defining the BDD File and the Dialog
- Defining the Green Screens
- Defining the Regions and Subregions for Each Screen
- Defining the Options for Each Screen
- Error Handling

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## Multi Screen Scenarios

The multi screen feature uses a dialog for which extended rules have been defined. You can use this feature for several purposes:

- Navigation
- Output Collection from Several Screens (Many to One)
- Input to Many Screens (One to Many)

# Navigation

You can navigate from a start screen to a final screen without showing the middle screens.

In the rule, you define the following for each screen: the data that have to be entered in the fields of the screen and the function key that is to be used to proceed to the next screen. The data for the first screen can be variable data, for example, the user ID and password for logon. They can be entered by the user in the dialog.

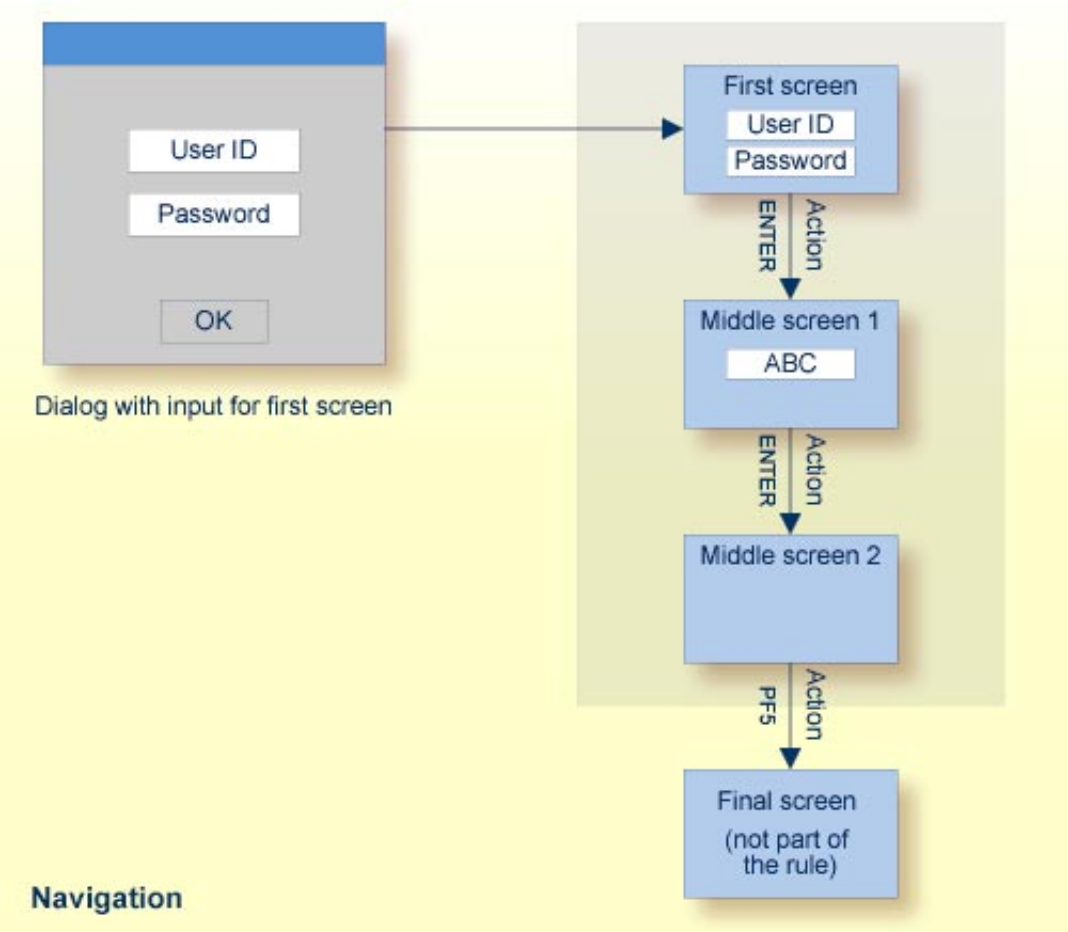
The dialog is shown when the first character screen is detected. This dialog either contains input fields or no input field at all. The input data from the dialog are entered into the character screen.

The input data and function keys for the middle screens are automatically entered as defined in the rule.

The final screen is displayed in the usual way. It is not part of the multi screen rule.

## Example

An example for this navigation is the logon to a specific application where the same steps are always required. There is a first screen in which you have to enter your user ID and password. On the next screen, you always have to enter the same application ID and press ENTER to proceed to the application's welcome screen. On this screen, you press PF5 to start your actual work.



# Output Collection from Several Screens (Many to One)

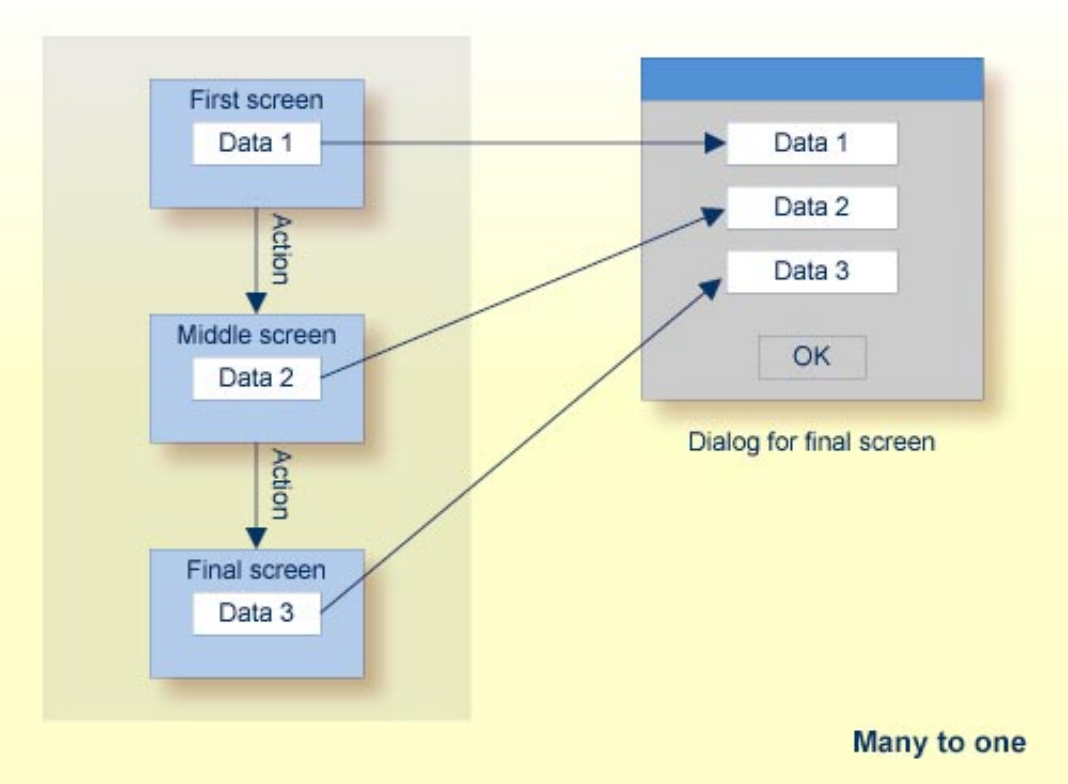
You can collect data from several character screens and show this data in a single dialog. We call this feature "many to one".

From a start screen, you want to navigate to a final screen without showing the middle screens. This is navigation as described above. In addition, data from the first screen and all middle screens are collected and merged into the final screen. The middle screens are not shown. The dialog is only shown for the final screen. The data collected from the previous screens are filled in.

The dialog for the final screen may also contain, for example, edit boxes and push buttons. However, these controls can only be linked with the final screen. The data collected from the previous screens are for display only.

## Example

The "many to one" feature is useful when the information you want to obtain from the application is spread across several screens which also contain information that is not needed at this time.



# Input to Many Screens (One to Many)

You can create a single dialog which contains data for several character screens. We call this feature "one to many".

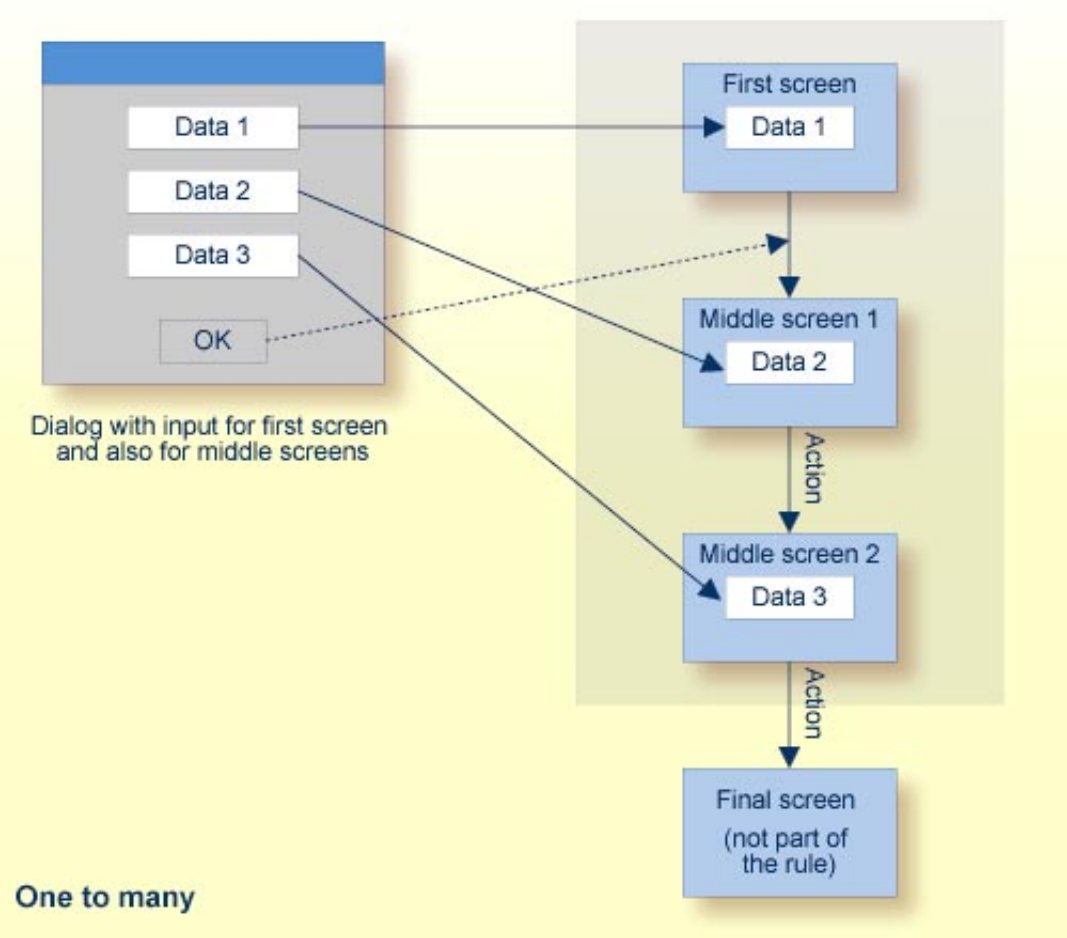
From a start screen, you want to navigate to a final screen without showing the middle screens. Variable input (supplied by the user) is required on several screens.

A dialog is shown for the first screen. It contains input fields for the data that is to be used on the first and subsequent screens. The dialog contains only one button with the host function that is used to proceed from the first screen to the next screen. Subsequent screen navigation is controlled by the actions that have been defined for each screen in the multi screen rule.

The final screen is displayed in the usual way. It is not part of the multi screen rule.

## Example

Many applications provide selection criteria on more than one screen for the retrieval of information requested by the user. The "one to many" feature enables the user to enter all required selection criteria on a single screen so that the required information is obtained in one step.



# Required Steps

1. Identify the character screens (also called "green screens" in this documentation) for which you plan to write a multi screen rule. Note down all required input data for a screen and the action (function key) that is used to proceed to the next screen.

2. Capture and save the screen files for all character screens that are to be detected (see *Using Screen Files*).

3. Use a resource editor to create a dialog for the required multi screen scenario.

4. Use the SDK to open the DLL containing the dialog that you have previously created with the resource editor.

5. Open the dialog that is to be used instead of the green screens. Each dialog can only be used for one multi screen rule.

6. Enable the multi screen option in the dialog properties (see *Defining the Dialog Properties*).

7. For each control in the dialog, specify the required control properties (see *Defining the Control Properties*):

   - On the Field Identification page, define the corresponding field on the character screen.

   - On the Screen Number page specify the number of the character screen on which the corresponding field is located.

8. Save the DDT file and build the BDD file (see *Saving the DDT File* and *Building the BDD File*).

9. From the **Extended** menu, choose **Detection > Multi Screen** to define the multi screen rule and the detection rules for all character screens that are to be used. This is explained in the remainder of this document.

10. Build the BDD file once more.

11. Decide whether the session is to be disconnected automatically when the multi screen feature fails in the viewer. See the description of the Server page of the Client Control Properties dialog box.

**Note:**
See also: *Rules Analysis* which is a useful feature for developing multi screen rules.

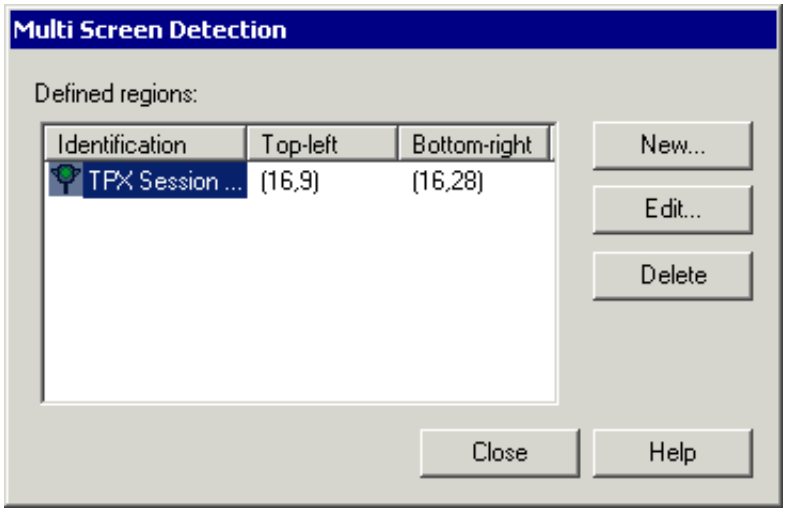
# Displaying All Defined Multi Screen Rules

Each rule that is defined in the Multi Screen Detection dialog box (see below) applies to one set of character screens.

### To display all defined multi screen rules

- From the **Extended** menu, choose **Detection > Multi Screen**.

  The Multi Screen Detection dialog box appears. When this dialog box is shown, a check mark is shown next to the **Multi Screen** command.




  When multi screen rules have already been defined, they are shown in this dialog box. When a rule is selected, the scope window shows the screen file that was open when the detection rule has been defined. The screen file contains an outline for the defined region that is used to detect this rule.

  The identification that is shown for a multi screen rule applies to the first screen that is to be detected.

  The color red in the symbol to the left of a rule indicates that this rule has been disabled. A symbol with the color green indicates that the rule is enabled.

  The following command buttons are available:

| | |
|---|---|
| **New** | Add a new multi screen rule and define the first screen to be detected. See *Detecting the First Character Screen*. |
| **Edit** | Modify the selected rule. Alternative: double-click a rule. |
| **Delete** | Delete the selected rule. Alternative: choose **Delete** from the **Edit** menu or press DEL to delete the selected rule. |

# Detecting the First Character Screen

When you add a multi screen rule, you first have to define the detection rule for the first screen.

**Note:**
The detection rules for all other screens are defined later. See *Defining the Green Screens*.

### To define the detection rule for the first character screen

1. Make sure that the screen file that is to be used as a template is shown in the scope window.

   The name of the screen file that is used to define the detection rule for a character screen is stored in the rule. When the rule is later selected in the Multi Screen Detection dialog box, the stored screen file name is used to open the corresponding screen file automatically.

2. Display the Multi Screen Detection dialog box as described above (see *Displaying All Defined Multi Screen Rules*).

3. Choose the **New** button.

4. In the scope window, use the mouse to select the region which contains the string that is to be used to detect the first screen.

   **Note:**
   It is also possible to define further regions and subregions for detection. See *Defining the Regions and Subregions for Each Screen*.

   The Multi Screen Detection Configuration dialog box appears.

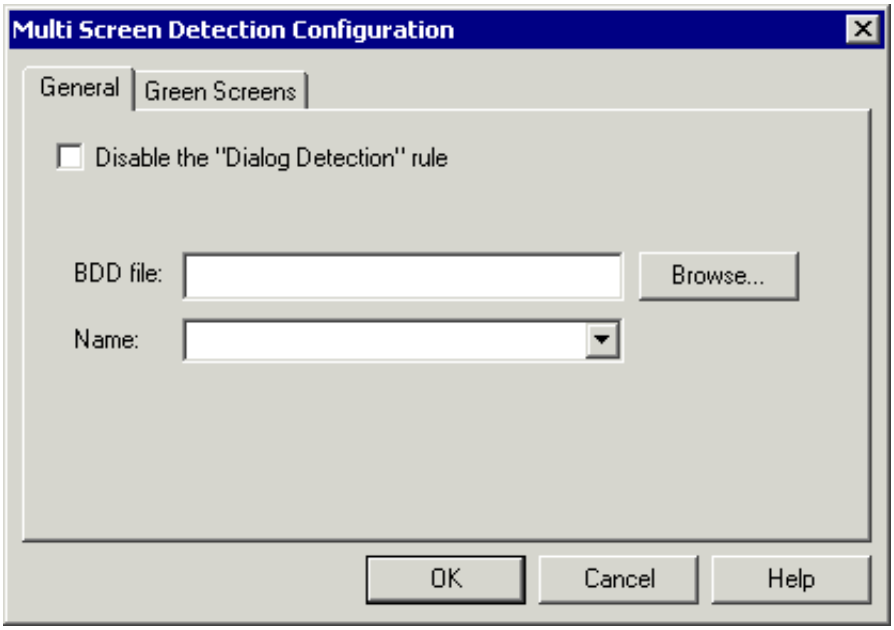
5. Specify all required information as described in the following sections.

   - *Defining the BDD File and the Dialog*
   - *Defining the Green Screens*

6. Choose the **OK** button.

# Defining the BDD File and the Dialog

The dialog box containing the page below appears when you choose the **New** or **Edit** button in the Multi Screen Detection dialog box.




**Disable the Dialog Detection rule**

When this check box is selected, this rule is disabled.

**BDD file**

Specify the path to the BDD file containing the dialog that has been created for your multi screen scenario. You can also choose the **Browse** button to select the BDD file from the Open dialog box.

**Name**

When a BDD file has been specified, you can select one of the dialogs contained in the BDD file from this drop-down list box. This is the dialog that is to be shown instead of the green screens.

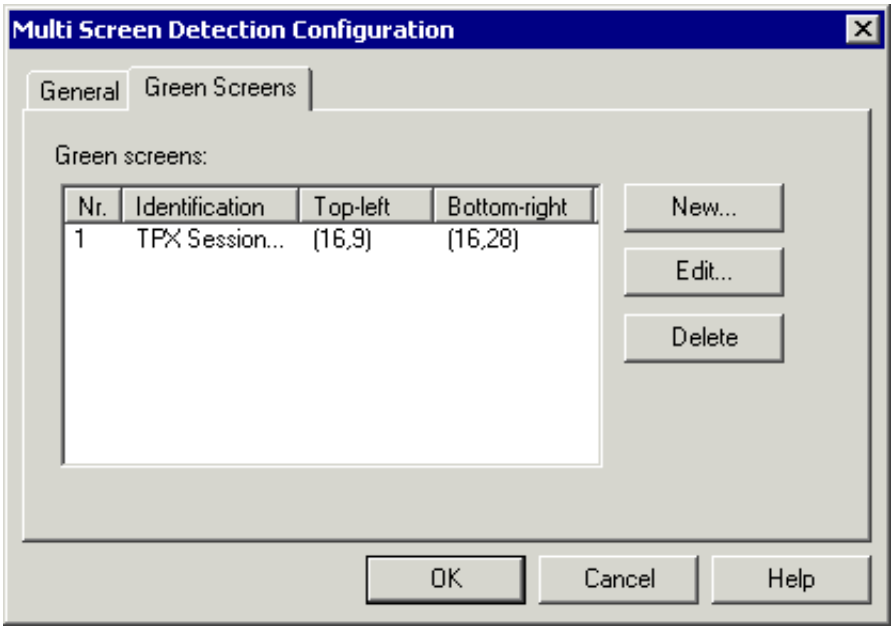
**Important:**
One dialog can only be used for one multi screen rule.

# Defining the Green Screens

The dialog box containing the page below appears when you choose the **New** or **Edit** button in the Multi Screen Detection dialog box.

The detection rule for the first screen is the detection rule for the multi screen rule itself (indicated by the number 1). To complete the definition for the first screen, select screen number 1 and choose the **Edit** button. Specify all required information on the General page of the Green Screen dialog box. See *Defining the Options for Each Screen* for further information.

After this, you have to define the detection rules for all other green screens that are to be used. Define the screens in the same sequence in which they are invoked on the host.




When you select a green screen in the above dialog box, the scope window automatically shows the screen file in which the detection rules for this screen have been defined.

The following command buttons are available:

| | |
|---|---|
| **New** | Add a new green screen and define its detection rules. See below. |
| **Edit** | Modify the selected green screen. Alternative: double-click a green screen. |
| **Delete** | Delete the selected green screen. Alternative: choose **Delete** from the **Edit** menu or press DEL to delete the selected green screen. |

### To add a green screen and define the detection rule

1. In the Multi Screen Detection Configuration dialog box (see above), choose the **New** button to add a new green screen.

   The Green Screen dialog box appears. The Region page is shown first.

2. Make sure that the screen file that is to be used as a template is shown in the scope window. To open another screen file, choose the **Open screen file** button in the Region page. You can then select the required screen file from a dialog box.

3. In the Region page, choose the **New** button.

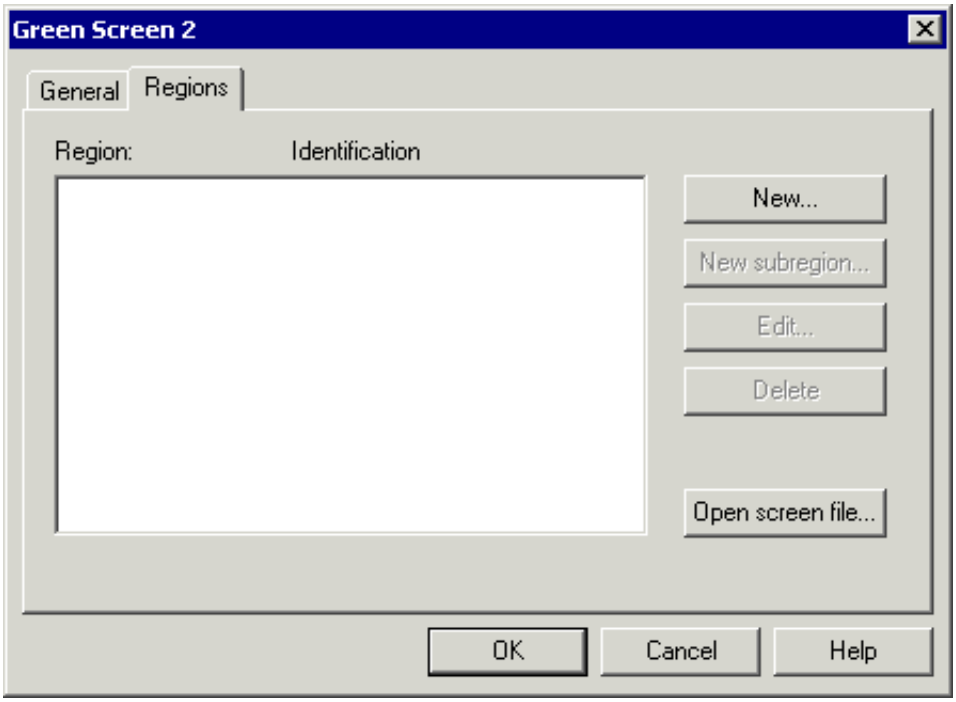
4. In the scope window, use the mouse to select the region which contains the string that is to be used to detect the screen. See *Defining the Regions and Subregions for Each Screen* for further information.

5. Invoke the General page of the Green Screen dialog box and specify all required information. See *Defining the Options for Each Screen* for further information.

6. Choose the **OK** button.

# Defining the Regions and Subregions for Each Screen

The dialog box containing the page below is shown when you add a new green screen or when you edit an existing green screen in the Multi Screen Detection Configuration dialog box.




The Regions page is used to define regions and subregions, i.e. unique strings which appear on each green screen that is to be detected. You can define, for example, that the screen is detected when region 1 *and* all defined subregions are found, *or* when region 2 is found.

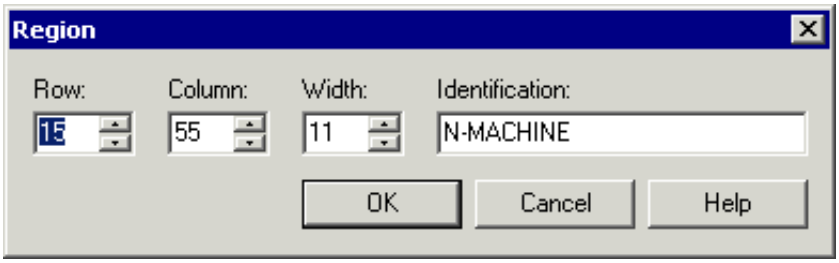
On this page, a defined region is indicated by the letter "R" at the beginning of a line. Lines which do not begin with the letter "R" apply to subregions.

The following command buttons are provided:

| | |
|---|---|
| **New** | Define a new region for the current screen. You have to select the required region in the screen file which is shown in the scope window. |
| **New subregion** | Define a new subregion for the selected region. You have to select the required subregion in the screen file which is shown in the scope window. For one region several subregions can be defined. |
| **Edit** | Modify the selected region or subregion. Alternative: double-click a region or subregion to modify it. See *Modifying a Region or Subregion* below. |
| **Delete** | Delete the selected region or subregion. When you delete a region, all of its subregions are automatically deleted. |
| **Open screen file** | Select a new screen file to be displayed in the scope window. |

## Modifying a Region or Subregion

The Region dialog box appears when you select a region or subregion on the Regions page and choose the **Edit** button (or when you double-click it).




### Row / Column / Width

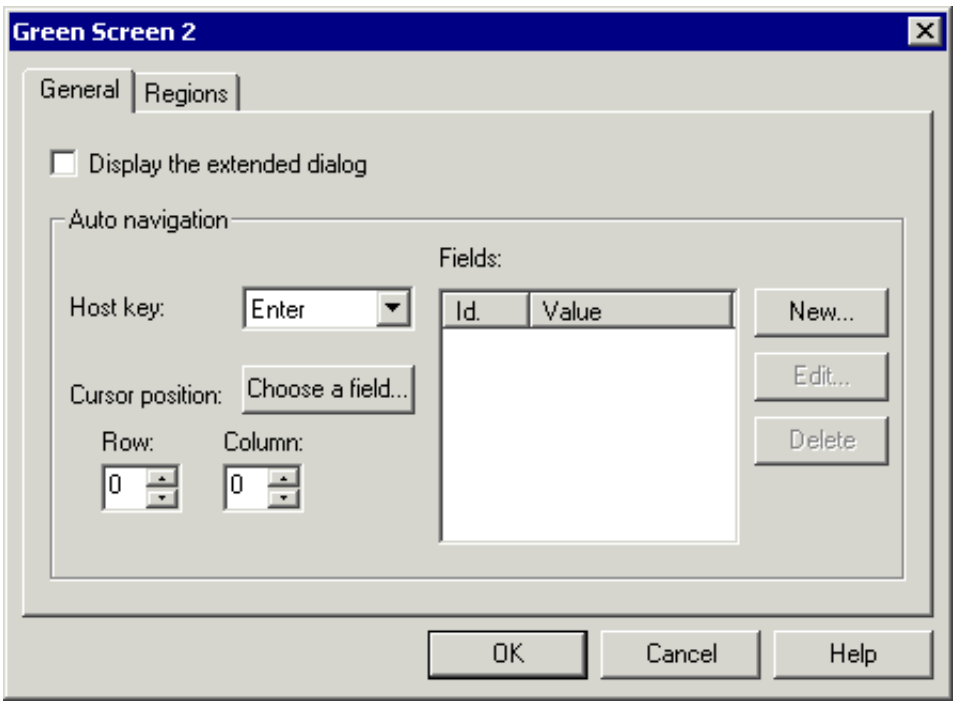
The position of the string that is to be used to detect the screen. This is the region that has been selected using the mouse. Using the spin buttons, you can manually adjust the values.

### Identification

This is the string that has been selected using the mouse. This string is used to detect the screen.

# Defining the Options for Each Screen

The dialog box containing the page below is shown when you add a new green screen (after a region has been defined) or when you edit an existing green screen in the Multi Screen Detection Configuration dialog box.




**Display the extended dialog**

When this check box is selected, the dialog will be shown in the viewer when this green screen is detected. In this case, the options for auto navigation are not available.

When this check box is not selected, the dialog will not be shown in the viewer. In this case, you have to specify the required auto navigation options. When the current green screen is detected, these options are used to navigate automatically to the next green screen.

**Host key**

Select the host key that is to be sent to the host in order to navigate to the next screen.

**Cursor position / Row / Column**

Specify the row and column into which the cursor must be placed in order to navigate to the next screen. You can either define an input field or an output field.

When a screen file is shown in the scope window, you can also choose the **Choose a field** button to select the required field.

### Fields

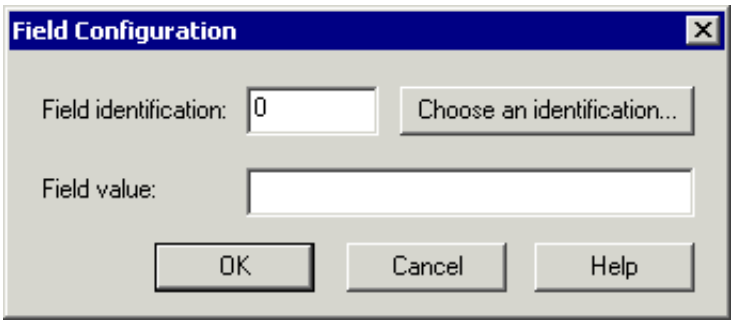
To navigate to the next host screen, it may be required to move data to specific input fields.

| | |
|---|---|
| **New** | Define the value for a specific field. See *Sending Data to an Input Field on the Host* below. |
| **Edit** | Modify the selected field. Alternative: double-click a field. |
| **Delete** | Delete the selected field. Alternative: choose **Delete** from the **Edit** menu or press DEL to delete the selected field. |

## Sending Data to an Input Field on the Host

This dialog box appears when you choose the **New** or **Edit** button on the General page of the Green Screen dialog box (next to the list box containing the defined fields).

It is used to move data to a specific input field.




### Field identification

Either type the field ID in the text box or choose the **Choose an identification** button to select the required field in the scope window.

### Field value

Specify the value that is to be moved to the input field.

# Error Handling

There is no specific error handling available for the multi screen rule in this version of Entire Screen Builder.

When the first character screen of a multi screen rule is not detected, the rule will not be applied.

If the next middle screen in a sequence is not detected, the multi screen rule will be terminated and the screen will be displayed with normal screen processing. This means that the rule is also terminated if the same middle screen appears a second time.